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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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CLEVELAND, O.

Capt. George McLeod, acting for the underwriters, sold the schooner Minnehaha at auction on Wednesday morning. Mr. A. J. Johnson was the highest bidder. and she was knocked down to him for $13,850. About $10,000 will be put in her rebuild.

Mr. M. A. Bradley intends to remove his office from the Perry-Payne to the Western Reserve building.

Work at the yards of the Cleveland Ship Building Co. has been held back on account of the steel angles being delayed in the shipments from Pittsburg. A large invoice, however, has just been received, and the shipyard is again busy on the third monitor type freight carrier.

The Chase Machine Company have placed one of their compact deck hoisting engines on the schooner Northwest, They have also sent to F. W. Wheeler & Co., W. Bay City, two of the Chase automatic fog whistle machines, and completed all the steampipe and boiler covering on the new light-house tender built at the "Globe."

Mr. John F. Pankhurst, who has been out of town all week, is expected here on Saturday.

The large new machine and boiler shop being erected by the River Machine and Boiler Works on River street, is nearly completed, and the moving of a portion of the machinery will be begun next week,

The official trial trip of the lighthouse tender Lilac, built by the Globe Iron Works Co., took place on Monday. The measured mile was covered in 3 min. 47 sec., showing a rate of 17.3 miles per hour. Mr. Janson, superintendent of construction, and Mr. Walfrid Sylven, constructing engineer of the lighthouse board, express their entire satisfaction with the boat. She will leave for the coast Saturday in charge of Capt. W. H. Harrison and pilot Capt. Joe Gorman. Capt. Harrison will also take the Columbine to the coast and then join his own command, the steam yacht Comanche, now being completed for Mr. Hanna.

Work on the Main street bridge improvements is simply dawdling along as if no interests were suffering, and vessel men, as well as the business houses on River street, are about disgusted with the slow progress being made. The director of public works has surely a voice in this matter, and he should see that all available help was kept at the construction work.

The new steamer Cadillac, built by the Chicago Ship Building Co., arrived here on Tuesday night on her maiden trip with 2,200 tons of ore from Marquette. Her officers speak in the highest terms of the easy handling and complete equipment furnished the Cadillac.

Among the vesselmen visiting port this week were Mr John Gordon, of the Northern Line; Mr. A. A. Parker; of the firm of Parker & Millen; Capt. George McLeod; compass adjusters; Capt. George A. Simpson, Frank Morrison, Mr. David Carter and Capt. Alex. Mc. Dougall, of "whaleback" fame, besides a large number attending the auction of the Minnehaha on Wednesday.

In the matter of vaccination, according to the Surgeon General's request, owners will offer every facility for the crews of their vessels to undergo this preventive operation.

No better argument for the location of an aid to navigation could be obtained than the fact of ship masters voluntarily defraying the cost of placing a lightship off Pt. Peninsula. Thirty masters, according to the latest advices, have contributed a sum of $300, and when a sufficient amount is realized Escanaba traders will be enabled to round the eleven foot shoal with less danger than is now experienced. This aid is being asked for and so far is willingly supported by masters, and not the Lake Carriers' Association, as formerly reported.

What is everybody's business is no one's, is clearly exemplified in what would seem to be the studied inattention given to this harbor. An honorary board of port wardens would probably find a way to suggest and advocate measures for the best interests of the port as the docks are too far away and the business carried on there too foreign for the municipal authorities to deal with.

At about 1 o'clock Wednesday morning, the harbor tug Griffin, owned by the Independent Line, was burned to the water's edge two miles off Rocky River. The four men of the crew under the charge of Capt. Chas Donahue escaped on the metallic life-raft, but so quick and fierce was the fire that they were unable to save any of their belongings on the boat. Even the boat's papers had to be left behind. After reaching shore on the raft one of the crew was found to be badly burned about the nands and face, and soothing lotions were applied to his wounds at a neighboring house. The Griffin was a complete loss. She was built in Buffalo in 1874, and had been in service in this port for two years. She was owned by Capt. Wm. A. Creech, manager of the Independent Line.

Capt. George P. McKay, is away on a vacation in one of the company's steamers which he manages. His recent illness called for a relaxation of business, and he is much too valuable a man to even be laid up. Capt. McKay has probably accomplished more in securing aids to navigation and other important measures affecting the welfare of the lake marine fraternity than any other individual, and his absence from vessel circles, if only for a few days, is noticeable.

The following is a list of steamers whose inspection certificates expire during the coming week:

Karl	July 13	Geo. F. Williams	July 21
Siberia	" 15	Laura D	" 21
Alethe	" 16	Mate E	" 21
Wm. Chishom	" 18		

Capt. John Sawyer, of Milwaukee, was appointed master of the barge Churchill, last week.

Inspectors Sinclair and Moore, of this port, have inspected 162 steam vessels this year to July 12th.

The Viaduct Brass Works report a fair patronage in their vessel specialties, and have orders booked well ahead for brass rails, dead lights, bell pulls, etc. All sorts of brass castings are made to order and in the shortest time possible.

CHICAGO, ILLS.

Special Correspondence to The Marine Record.

The Independent Fuel Co. will have their new McMyler derrick at work this week, working capacity one 5-ton bucket per minute. One hundred buckets will be kept filled, and be run down to the dock on a gravity track This will give the company the facilities for the quickest dispatch in fueling on the upper lakes. The company have recently put in an Edison electric light plant, so that they can work nights as well as days The steamer Nebraska was at the dock Monday loading 600 tons of coal for fuel and ballast.

Capt. Wm. Finnegan, of the steamer Puritan, which arrived Monday noon, informed your correspondent that the body of Peter O'Grady, who was shipkeeper on the schooner Hattie Fisher, and was drowned November 10th, 1891, in Beaver Harbor, Mich., was washed ashore last Saturday evening. His remains were interred Sunday by Father Peter Gallagher, owner of the schooner.

J. F. Pankhurst, vice president, and general manager of the Globe Iron Works Company, Cleveland, arrived here Sunday morning.

The V. O. T. Co.'s tug Van Schaick commenced running Saturday with one of the new Beck steam steerers. Capt. George Jewell gave the steerer a severe trial, and is well satisfied with it, and speaks in the highest terms of its working. The Company have two more of the Beck steam steerers here which will be put on their tugs Union and Protector. F. P. Breck, representative of the builders of the Beck steam steerers, was here Monday, getting the tug Union in shape to receive one of their steam steerers.

The steamer Nebraska arrived Monday morning from Milwaukee, where she has had about twenty thousand dollars expended on her, converting her into a passenger steamer. She makes a very fine looking passenger boat. She will have a Crowley & Johnson steam steerer, and an Edison electric light plant. Next winter she is to be fitted out with Pullman sleeping berths for passenger accommodation during the World's Fair. She is owned by Capt. E. D. Cummings. Capt. Wm. E. Chateau is in command; Wm. Rice, first mate; George Town, chief engineer; Hill Reid, assistant engineer. She takes a party of excursionists to Ludington Wednesday morning.

The new steel steamer Cadillac, recently built by the Chicago Ship Building Co., left South Chicago for Escanaba on her first trip Saturday. She would have left a week sooner had she not collided with the abutment of the bridge over Calumet river when going out the Sunday previously, which necessitated her going back to the shipyard to receive some new plates in her bow.

There is a rumor afloat that Capt. D. M. Cochrane, the owner of the fine side-wheel steamer, John A. Dix, has been offered the general superintendency of the World's Fair Steamship Company. There are several applicants for the position. The syndicate and the worthy captain's marine friends consider him the best man for the position, and all hope that he will accept it.

Capt. Dan. McLeod arrived here Friday morning from Buffalo, and left in the afternoon for Milwaukee to survey the steamer J. C. Pringle, recently in collision with the Morse.

The following are the names of steamers in the Chicago district, whose inspection papers expire as per dates-

Adelaide	July 15	Frankie	July 17
Gypsie	" 16	Imperial	" 21
Ellie Greggs	" 16	Algie	" 24

Harry S. Channon, of the firm of H. Channon & Co., ship chandlers, leaves here Saturday for New York, where he will embark on the steamship Adriatic, of the

(*Concluded on page nine.*)

THE UNITED STATES COMMISSIONER OF NAVIGATION.

On the resignation of Captain Wm. W. Bates known to all lake interests as formerly manager of In'and Lloyds. Mr. Edward C. O'Brien was appointed as the United States Commissioner of Navigation and little or no fiction has arisen from the somewhat arbitrary change notwithstanding the prognostications that such would certainly ensue on account of the technical ability of the former commissioner.

Captain Bates, was perhaps too radical in his views and voiced the sentiment of the marine community ahead of our age, be this as it may Mr. E. C. O'Brien has wonderfully filled the appointment and to the eventual betterment of the United States mercantile marine.

E C. O'Brien, Commissioner of Navigation, is an active man, well known in political circles at the Capital, having served as disbursing officer of the Fifty-First Congress and as treasurer of the Republican National Congressional Committee. The members of the Fifty-First Congress, with whom Mr. O'Brien was decidedly popular, will be pleased to learn of his appointment. Though not widely known to the marine interests of the northwestern lakes, which now comprise the big end of the country's marine interests, still Mr. O'Brien brings to the office the activity of early manhood, coupled with great executive abitity, and with a familiarity gained in the handling of freights (as the agent of others) between the west and the east he is well aware of the needs of the merchant marine if it is to continue its wonderful growth of the past five years, and so far as lies in his power it is safe to say he will give to the newly acquired duties of the commissionership the time and attention they demand that will assure of their being so disposed of that his appointment will reflect credit on the administration.

COMPASSES AFFECTED BY LIGHTNING.

The following is from a report from Capt. Woodcock, of British steamship Capella, giving an account of his vessel being struck by lightning. The incidents occurred on May 16, in latitude 18° 12′ N., longitude 70° 50′ E. The Capella is a steel steamer of 2,036 tons net register, and is fitted with two masts, the lower masts being of iron and the topmasts of wood. "The morning was squally, with rain and thunder and lightning; about half past seven the weather showed signs of clearing up, when, after a considerable interval, there was a very vivid flash of lightning, accompanied by a violent explosion by the rail, near the starboard fore rigging, which seemed as if something had exploded and scattered sparks of fire over the ship. The foretopmast was splintered near the spire, and some service torn off the topgallant backstay. The shock also affected the compasses; that on the upper bridge was deflected from N. 72° W. to N. 45° W., and remained for a short time that way. The wheelhouse compass, which had previously shown W. N. W., now showed E. S. E., and the compass on the poop was considerably affected also. After trying another compass card in the wheelhouse, found the card was not affected, but the shock had changed the magnetism of the ship so much that it reversed the card. The westerly deviation on the upper bridge compass was later on found to be increased 9° W. to 19° W.; on the course steered (N. 72° W.) At 4 p. m. swung the ship completely round and found the errors of the compasses very much altered from 6° W. to 27° W. It was found after the ship was turned round that the wheelhouse compass had regained some of its original power, as the north point again pointed somewhere towards the north. Since the occurence the compasses have never regained their original errors, and the magnets have had to be moved, and some reversed, to reduce the errors and make them easier to be applied."

FOR LAKE DEFENSE.

Writing to the *Inter Ocean*, Chicago, Mr. W. F. Angell suggests, "that the different cities along the lakes organize companies of naval reserves on the same plan that is in successful operation in the cities of Providence, Boston, and New York, and in a short space of time they would become as efficient as the Eastern members showed themselves to be in their last summer's practice on the vessels of the White Squadron in Long Island waters and in Boston Bay.

"I will also suggest," said Mr. Angell, "that the native Americans begin at once the formation of a company of naval reserves in Chicago, and by so doing put this city to the front again, in this move for lake protection. Such a course would certainly in no manner violate any of our treaty stipulations. It can readily be seen that this course would enable us to concentrate a body of trained men at any point on the lakes where they might be most needed in time of trouble, with very little warning, and the transportation could be by land, and not by water, and subject to the observations of the enemy. There are possibilities connected with this plan that would take too much space to detail here, but would readily suggest their importance in due time. Having furnished my views in this matter, I will be pleased to hear from others on this subject."

GAS LIGHTED BUOYS.

There has been considerable discussion in the past regarding the system of gas lighted buoys and if our memory serves us right at this time, the U. S. Light-house Board are now experimenting with one in Gedney's Channel, N. Y. The Dominion government have three of these lighted bouys now in use and the Minister of Marine makes the following report on them:

"In continuation of the policy of improving the character of the lights wherever it can be done without undue expense, the character of the gas lights shown from three buoys, in the river St. Lawrence, below Quebec, was changed on the 25th of August last from fixed white to occulting white, the period of occultation being about six seconds. The buoys so changed were those on Barrett Ledge, Pilgrim Shoal and the Channel Patch, and the changes were made for the purpose of making the character of the lights more distinctive, and to prevent confusion with anchor lights of small coasters.

During the season all the gas bouys were served by the steamer Druid, and were found to require considerable attention. Those in the frequented channels seem to be specially subject to having the light extinguished by collision with small vessels."

CANAL PORTAGE.

Some of the larger eastern yachts of more than eight feet draft may yet be able to come through via the St. Lawrence river and lake route to the World's Fair. Lieut. Baker, of the marine division of transportation exhibits, has received a letter from Wm. Lesslie, manager of the Collins Bay Rafting & Forwarding Co., Limited, dated Collins, Bay, June, 27, 1892, to the following effect:

"Dear Sir:—I understood that you are in receipt of inquiries as to the dimensions of the St. Lawrence canals, and the possibility of getting some of the large ocean yachts through them to the World's Fair. The dimensions are as follows: Length, 183 feet; breadth, 45 feet, and depth at present stage of water 8 feet 6 inches. Our company are provided with steel pontoons for lifting vessels that are too deep to come through at above draft and will be pleased to furnish all necessary appliances and contract for the lifting and of bringing of such vessels through from Montreal to Lake Ontario, or through the Welland canal if so desired, will be obliged if you will refer any such inquiries to us at this place."

THE NEW STEEL STEAMER PIONEER.

The new steel steamer Pioneer, built by the Detroit Dry Dock Co., at their shipyard in Wyandotte, to the order of the Cleveland-Cliffs Iron Co., made her first round trip this week, and her officers speak in the highest terms of the new steamer.

The Pioneer carries 1,600 tons on a draft of 14 feet 6 inches, and is especially built for the Lake Superior pig iron trade. She has three swinging derricks to facilitate the loading and discharging and other special equipment, besides being fitted with steam windlass and capstans, steam-steering gear and electric light system. Her dimensions are: 248 feet keel, 35 feet beam and 18 feet depth of hold, engines triple expansion, cylinders, 20, 33 and 54 by 42 inches stroke, built by the Detroit Dry Dock Co.; she is also fitted with Howden's forced draft.

The officers of the Pioneer are: Captain, A. E. White; chief engineer, D. A. Block; chief mate, H. Harris, 2nd. engineer, G. Gourley, and 2nd mate Ralph Gleason.

A COMPLETE LIFE-SAVING STATION.

The Secretary of the Treasury has awarded the contract for the construction of the U. S. life-saving station, authorized to be erected upon the grounds of the World's Columbian Exposition at Chicago for $7,878. The station will be a part of the government's exhibit at the fair. It will be one of the most complete of its kind ever erected, and will serve to illustrate in the best manner the organization and methods of the life-saving station. It will take the place of the present Chicago life-saving station, the crew of which will be moved to the new equipment

TREATISE ON STRUCTURAL STRENGTH OF IRON AND STEEL SHIPS.

BY JOSEPH R. OLDHAM, N. A., CLEVELAND, O.

[Concluded.]

As regards doubling strakes on topsides, let me say a word or two to start with. I may say doubling is not an economical way of obtaining strength, but sometimes it is the only way practicable, and when we have no alternative we must accept the inevitable, doubling strakes to be efficient, must be carefully fitted edge to edge of the plate above and below, and when the doubling is inside, it should not be riveted through the outside plate at the (doubling plate) butts if they are situated at a weak point such as a gangway, or at the break of a deck.

Again, a doubling plate ought never to be a continuation of an adjoining plate either above or below. Let us make a comparison between a doubling plate forming a portion of the topside plate below and a doubling plate being distinct from such plate. Assume this to be the only difference in the two cases. Estimate this at the solid part of the sheer, ignoring the loss by frame, and landing rivet holes for the moment (as it is butts we are now considering) call the sheer strake 100, butt of doubling plate 60, topside plate adjoining, 60; total, 220.

In the second case, sheer 100, doubling 100, topside 60; total, 260. Difference in per centage between 220 and 260 is 15, which means fifteen per cent. in favor of the sheer doubling, being a distinct plate and thereby obtaining an extra shift of butts.

These are only little matters, but they amount to something, just as the small weights do in shutting out cargo.

Referring to bilge stringers, the modern practice is to fit solid bulb double angles. This, of course, is the cheapest form of stringer, but, in my opinion, is by no means the best, for it is hard to get a good butt joint with such sections; whereas, with the old style of double angles, with a bulb riveted between them, you may get as great, or even greater strength without any butt strap whatever, merely by making a judicious arrangement of the butts between the two angles and the bulb.

Say that we get a butt-joint with the solid bulb equal to 60 per cent. of the strongest section, and to compare this, call the bulb at solid part 300, then 60 per cent. of 300 equals 180, with the separate pieces we have one angle equals 100, and bulb equals 100, or total 200, even without any butt strap, but now allow for each angle 100 and 60 for the bulb, and we have 260, which is nearly 70 per cent. gain by the separate pieces. If the broad flanges of angles be placed on the frames and double riveted thereto, the gain would be much more than this, for only two rivets every 24 inches, which is usual, is anything but adequate fastening for either a bilge or stringer angle.

As regards the upper, or upper portion of web-frames, I am strongly in favor of fitting such at about the centre of each hatchway, I mean at the centre longitudinally of course, and where the upper stringer plate is comparatively narrow, I think these web-frames should extend from the side of the vessel to the side of the hatchway. It goes without saying that the hatchways are the weakest places in the deck, for not only is the deck cut there, but one and sometimes several beams are also cut, so such plates not only stiffen and take the thrust of the side, but they support the upper deck where the beams are cut, and also tie the comparatively light upper works to the heavy main deck beams.

In cases where there are no main decks, I would recommend that the upper portion of web-plates be made at least equally as broad as in the former case, but of course much heavier.

As regards flimsy steamers, let me give you a note of warning: About twenty years ago, there arose a spirited opposition between two great shipping associations. Now, I believe in opposition, and even in spirited opposition, so long as the spirits are good and are urging us on in a right direction, but when men's lives and valuable property are the stakes for which the opposition is being waged, I, for one, am not likely to be infatuated with it.

To be brief: One plausible man in a prominent position said that all the steamers were being made much heavier than was necessary. Some shipowners were more than pleased to hear this, and they immediately cried out "a prophet indeed," for like him of old, who foolishly would not listen to the admonitions of his ass, because such warning conflicted with his own predilections, they approved of the advice, and, so many a flimsy steamer was at once contracted for, and bolstered up by a powerful association and went to sea. Gentlemen, about 50 steamers such as I refer to, went suddenly to the bottom at that time, and their crews went with them. There is little fear of such catastrophes happening on our lakes, but flimsy steamers are sometimes a trouble, and also expensive to their owners in the end.

I remember once having charge of the lengthening of a large steamer in dry dock, and before the double bottom and upper decks were completed, the builders desired to float the vessel and remove her to their shipyard. I objected, and no doubt my objection was considered somewhat unreasonable, but having seen a nearly new steel steamer most severely hogged by cutting one or two sheer strake and stringer plate butts

straps loose whilst the vessel was afloat, I think the position I maintained was not in any degree over-cautious.

I may quote Mr. White's figures and show the excess of weight over buoyancy at the ends of a steamer 400 feet in length:

First, 80 feet from the bow weight 420 tons in excess.
" 70 " " " stern " 450 " "
250 feet amidships; buoyancy, 870 tons in excess.

The maximum hogging moment experienced at this steamers midship section was equal to the total weight of the ship by 1-88 of her length.

As regards bottom damage, let me remind you that the unloaded Brittania Bridge was almost destroyed by a fall of only a few inches, if this be so, why should great surprise be expressed by gentlemen interested, on learning the result of "only a touch' after reading a damage survey report and appraisal.

Gentlemen, thin steel bodies, (and I may say that the bodies I refer to are becoming still thinner, and more attenuated with a rush) possessing a weight of some four or six thousand tons, only require to touch a solid substance with a very low velocity of impact to do considerable damage. In connection with my allusion about repairing the bottom I may say that in the case of the damaged plate being on an outside strake, that plate could be cut off, furnaced, faired, and re-riveted in place as before for about one hundered dollars, but to do the same work on an inside strake, the cost will be about three times as much, for three outside plates and frequently a portion of a fourth plate have to be cut off and re-riveted again, hence the necessity for flush bottom plating in our lake steamers.

DEAD-WEIGHT ABILITY AND HOGGING.—Some of you no doubt have observed great discrepancies between the expected capacity or dead-weight ability of new steamers, and the actual weight carried, and certain it is, that that has generally to be laid to the charge of those entrusted with the calculations of the equipped weight of the steamer, and I may say that such weights are too frequently seriously incorrect, and chiefly so, for this reason, that the large or heavy weights are usually correctly ascertained, and just as correctly added up, but not so the small weights, for it is frequently the case that good shipbuilders and others will carefully ascertain the weight of steel required for a steamer and will just as carefully ascertain the weight of the principal pieces of machinery, and boilers to be placed on board, but joiner work, blacksmith work, plumber work, riggers' work, small details connected with the outfit and loose stores are usually assumed, and when I tell you that this assumption has to account for over one tenth of the gross weight of our modern cargo steamers, you may easily understand why your steamer is measurably deficient as to dead weight ability.

But there is another cause of error, though it is error of a different kind, it is error the result of ignorance in most cases, and not the result of carelessness, at least, as regards the consequences, we are now considering. I mean the error resulting from false mean or midships draft of water when such are applied to the scale of displacement, parenthetically, I may remark that if the correct light draft be known nothing should be more accurate than the reading of the displacement scale to indicate the carrying power of a ship, when the true mean draft loaded is also ascertained, but this is frequently not ascertainable under ordinary conditions of steamship working, for though we quote the draft shown on the stem and stern-post correctly, add these figures together, and divide the sum by two, it does not yet follow that we know the true mean draft, for I believe that some of our long steamers, as at present marked, may "hog" several inches without such dropping of the ends being discernable, and even a drop of two or three inches in some of these steamers, means an error against the ship, and against the shipbuilder of from 70 to 100 tons.

Would it not be well to take some trouble and mark the sides at mid-length, so that the true mean draft may be known, and then you may trust to your displacement scale implicitly. In conclusion I may say that you may dismiss from your minds the practicibility of doing any large general trade with economical lake steamers, from these lakes across the ocean, particularly if the ocean to be crossed be the North Atlantic, the conditions of navigation and working generally are altogether diverse, and are, in my opinion, quite irreconcilable with due regard to economy in first cost and working. Of course we can build a class of steamer here more suitable for a combined lake and ocean trade than existing tramp steamers, and that too, for less money than they cost. Such a steamer as I mean ought to carry about 3,500 tons on 14 feet draft of water over these lakes, and then be loaded down to about 5,000 tons dead-weight on the coast as her export freight, but this vessel would not be an ideal lake steamer. A good carving knife would not answer well for shaving a man, and the best of street carts would make but a sorry field-gun carriage.

If supreme importance is attached to the over-sea tonnage of Britain surely there is something for Americans to strive after. We would like to ask why is the stars and stripes noticeable by its absence in the commercial marts of the world? Is there no vim, enterprise and speculation in our midst and in the words of the prophet "why is this thing thusly?"

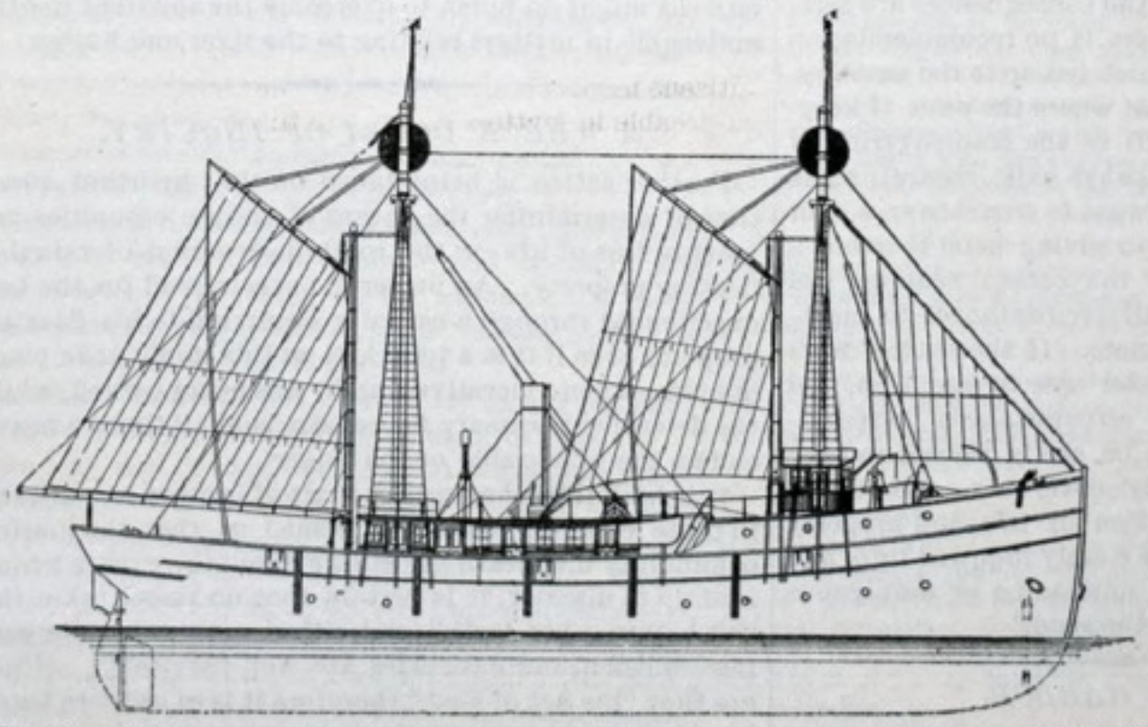
DECADENCE IN ERIE CANAL TRANSPORTATION.

The Erie Canal is in a bad way. Even its best friends are losing hope, and if something is not done to divert it from the down grade it has taken, the time is not far distant when it will be a lone ditch, without a boat to navigate it. The 30,000,000 bushels of grain carried by it last year was a heavy decrease from former years, yet Buffalo never before received so much grain. This season the amount carried is pretty sure to be still smaller by an alarming percentage. The veto last winter of the $500,000 repair bill by Gov. Flower was not only a blow to the direct interests of the canal, but it showed for the first time that the enemies of New York's once proud waterway were in the ascendancy. In the previous session the bill for extraordinary repairs failed, but the failure was laid to politics, and no great alarm was taken by canal men on account of it. The canal is fairly well maintained by funds obtained from the regular supply bill, and there is no complaint from the boatmen as to depth of water, but the difficulty lies in the fact that for thirty years nothing has been done beyond lengthening some of the locks, to keep the canal up with the times. The railroads have simply outrun it, and they are expending millions every year for extraordinary improvements.

In spite of this discouragement there is a remedy in sight, if only there are those at hand to take advantage of the situation and if the State can be induced to improve the canal by deepening it until the boats can carry at least 10,000-bushel cargoes instead of the present 8,000 buseels. It must be confessed that there must be an extraordinary effort made to secure State aid to do this work speedily, as it must be done soon to be of account. With the added depth the boatmen say they can carry wheat for 2c. and make money. Now they are starving at 2¼ cents, largely because they are unable to obtain cargoes at all on account of the terminal charges. With elevators of their own in Buffalo and New York that charge only actual expenses, and with cargoes in five figures, the boatmen feel that they would be forever independent of the roads, for the water route, with equal chances, is much the cheaper naturally. With either the deeper canal or the control of the terminals and the prospect of securing the other soon, the boats could easily keep along until profit could be secured through the addition of the second desideratum, but with neither there is nothing left but starvation. It remains to be seen whether personal energy or State confidence will combine to restore the lead so long enjoyed by the canal. The prospect is not at present particularly bright, though the effect is being made to wake up the commercial interests of the State and bring them to the aid of the canal.

LIGHTSHIPS FOR THE COAST.

The first of the four new iron light ships numbered 51, 52, 53 and 54 building at the yards of F. W. Wheeler and Co., West Bay City, Mich., to the order of the Light House Board, and which is herewith illustrated in this column, is completed, and cleared last week for the coast to take her station off Cornfield Point in Long Island Sound. Numbers



52, 53, and 54, will be placed respectively at Fenwick Island Shoal off the coast of Maryland, Frying-Pan Shoal off the coast of North Carolina and Martins Industry Shoal off the coast of South Carolina.

Their dimensions are 118 feet 10 inches over all, 110 feet between perpendiculars, molded beam 26 feet 6 inches, depth of hold from top of beam to top of keel 14 feet 6 inches and depth of hold 13 feet. These vessels are fitted with compound engines, steam whistles, steam windlasses and propellers, so that steam can be used by each vessel to blow her whistle, get her anchors, hoist her lanterns, etc., and get to and from her station with her own steam. The hawse holes is forged into the stem in order that the vessels may ride more easily and to avoid the use of a bridle, and the hawse pipes are of cast iron fitted in a substantial and neat manner. Four watertight bulkheads extending up to the main deck and built so as to stand a hydrostatic pressure of not less than that equal to a head of water of 16 feet. The shell plating is machine planed and run in, inside and outside strakes, bilge keels 55 feet long are fitted to conform with the natural run of the water when the vessels are anchored in a tide-way or in motion. The stems are of the best hammered iron 7 by 1⅝ inches, and stern post forged solid with the rudderpost. They have also bar keels The engines and boilers and machinery consists of one right-handed, two bladed, cast-ironscrew-propeller of about 6 feet diameter, driven by a compound surface-condensing vertical two-cylinder engine, cylinders 14 and 25 inches in diameter, and a stroke of 16 inches.

There are two cylindrical single-ended steel boilers of the Scotch type, 8 feet in diameter and 9 feet iong, provided with a Fox's patent corrugated furnaces 336 inches in diameter, in each boiler. Also a donkey boiler, 7 feet 3 inches in height, and 4 feet 6 inches in diameter. Furnished and fitted in place one horizontal, non-condensing engine, about 5 inches diameter of cylinder and 6 inches stroke, with properly attached machinery for operating the steam whistle; also one Baird's No. 3 distilling apparatus, with necessary evaporator, filter, pumps, etc.

The lightships have two masts, fore and aft rigged and show two lights visible all round the horizon. The electric lighting and light-house appliances and devices are perfect and inclusive, so that with the completion of this important contract, the firm of F. W. Wheeler and Co., West Bay City will be represented on salt water by a fleet of six iron and steel vessels.

THE FIRST LIFE SAVING MEDAL AWARDED ON THE LAKES.

The first medal ever given to a woman was awarded to Miss Edith Morgan, the keeper of a lighthouse on Lake Michigan in 1859. She was very brave, but as she didn't endanger her life to such a degree that the Board thought she deserved a gold medal she was awarded a silver one, and it was sent to her. Miss Morgan was not satisfied. She thought she deserved a gold medal if she deserved anything, and returned it to the department with a statement to that effect. This was while Sherman was Secretary of the Treasury. The Board did not agree with Miss Morgan, and then it was considered a great thing to present a medal, and as she was the first woman, antedating Miss Ida Lewis by only about six months, there was no precedent with which to draw a contrast. The medal remained in the safe of the life-saving Board for a number of years, but finally Miss Morgan discovered that it was an honor to secure a silver medal and presented a claim for her medal, which was forwarded to her.

THE SUNKEN STEAMER PEWABIC.

TORONTO ONT., July 11th.

To the Editor of The Marine Record.

Will you kindly give the year in which the steamer Pewabic sank? How did she come to be in Thunder Bay with her valuable cargo?

SUBSCRIBER.

The Pewabic was sunk through collision with the steamer Meteor, August 9, 1865, while steering the usual Lake Huron course. The position of the sunken steamer from an observed bearing is given as 5½ miles S. E. ½ S. from Thunder Bay Island Light, but whether this single bearing is a compass, magnetic or true, I am not in a position to state, probably the former! The latest information regarding the wreck is contained in the following: [ED.]

"The wrecking steamer Emerald, after trying for the past six weeks to locate the wreck of the long-lost steamer Pewabic, has given up the work. A. H. Osborn, of Ashland, a member of the Durfee Wrecking Co., who fitted out the expedition after viewing the prospect ordered the expedition back to Ashland, stating that the Emerald was chartered to raise the sunken ironore schooner Lucerne, which lies in 20 feet of water, near Madeline Island, 20 miles from Ashland, and that she would probably return to work on the Pewabic later in the season. From what can be learned it looks as if the Durfee Wrecking Co had become discouraged, and the work was given up entirely. Not the slightest trace of the steamer has been found this season, although every foot of bottom in the vicinity where it was supposed the Pewabic was located last year has been gone over with a sweep. Diver Duncan, of Boston, who is a man of large experience, says that he is satisfied that what was thought to have baen the wreck last season was only a ledge of rocks, as several large ledges were located in that vicinity. The Pewabic will doubtless continue to rest where she has lain for 27 yesrs.

THE United States mercantile marine must be built up a any cost, otherwise we simply play second fiddle to other maritime nations. With our coast line too much protection can not possibly be guaranteed despite the crorkers of the free hip bill, who would ruin what we now possess.

The Marine Record,

ESTABLISHED 1878.

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CLEVELAND, O., JULY 14, 1892.

ON page 10 of our current issue will be found a communication from E. C. O'Brien, U. S. Commissioner of Navigation, on the feasibility of establishing a nautical training school for and on the lakes. This is a measure which THE MARINE RECORD has consistently advocated for some years, and we are pleased to see that the suggestions heretofore advanced are likely to meet the general endorsement of vessel owners. Those with whom we have conversed on this subject favor the plan, and a number have written to the Commissioner of Navigation favoring the adoption of such measures as will lead to the establishment of such an institution. The success attained by the initial step would soon demonstrate the advisability of placing a vessel on each lake, thus forming a nursery, as it were, to replenish and augment our naval and mercantile marine.

THE RULE OF THE ROAD.

If anything was wanting to prove the utter incompetency of the present "rules of the road," the following special ought to open the eyes of the Board of Supervising Inspectors:

"The steamer Spokane, bound down, and the steamer Avon, bound up, approached each other in broad daylight Saturday last, off Mamajuda Island, in the Detroit river. The Spokane gave two whistles and the Avon one. They kept up this performance until they came together, fortunately without serious disaster. The Avon received a glancing blow on the starboard bow and her upper works were considerably damaged. The Spokane was probably uninjured."

This is one of those cases in which the rules as at present formed seem to lead seamen into. No cross signal will be tolerated. Each holds strictly to his own view and signal until it is almost too late to give way, or up to the moment of impact, and if the consequences are serious, a lawsuit follows; but there is no recommendation to alter or amend the "rule" which led up to the casualty.

We have long maintained that where the onus of keeping clear, or giving way is left to the manœuvering of both vessels, a doubt must always exist regarding the action of each. One does not want to travel over a foot more ground than the other in giving helm to avoid a too close contact, neither does the careful seaman feel justified in giving way under all circumstances to meeting, passing or crossing steamers. If the "rules" were positive in stating which vessel was to stand on, and which to give way under all circumstances, responsibility and action might then be easily placed, and the qualifying code would amply cover the exceptional cases. For the better protection of life and property these casualties should be more closely inquired into, and measures taken to avoid any misleading or ambiguous terms in the present "rules of the road."

CLEVELAND HARBOR.

It is more than singular to find so little attention being paid to the maritime interests of Cleveland. It not unfrequently happens that vessels consigned to the port cannot approach their docks, or get stuck in mid-channnel at points where with due care there should be found an abundance of water.

The Federal government, as represented by the Corps of Engineers, U. S. A., has charge of the disposition of funds and the approach to the port, yet, it cannot be expected that the government will deepen the river for private or municipal advantages, so that the entrance, outer harbor and strategical points of military importance being well conserved, no further assistance can or should be rendered by the commonwealth.

Next comes the query, if it is not the plain duty of the Engineer in charge of the port to conserve the entire navigable portions of the waterway, whose is it? The most pertinent and rational reply to this would be, it is the bounden duty of the interests benefited thereby, viz: the municipality and to the corporate body governing he city should the citizens thereof look to for the conservancy and permanent improvement of all waters within the corporate limits. It is only when the partial or total obstruction of such waters are endangered that the Secretary of War is empowered to interfere in behalf of the common rights of the nation at large.

Railroad aggression is perhaps more noticeable along the water front of the Great Lakes than elsewhere, and as the "iron horse" was the principal factor in developing the country, the right of previous occupation is shouldered up by an immense power and influence so that not even a military fort could be built at the harbor of Cleveland without intrenching upon the property now occupied by the railroads, whose ownership, real or assumed, it is difficult to undermine either for local, state or national purposes. A revocation of title or the dispossession of acquired territory are unknown quantities in the vocabulary of the railroads for they never give up, and when pursued to the "halls of legislation," it is usually found that they have only been chased into their stronghold.

It has been suggested that a line of wharves be built along the fine protected sheet of water known as the outer harbor, and a railroad company stands ready to construct same, yet, it would be the most insane act conceivable for the municipality to grant this right of construction unless every foot of ground so made was freely deeded over to the city. The outer harbor is already in the grasp of the railroads, and it would be almost impossible to even run a line ashore without landing on railroad property, a fact that lends color to the statement that "the breakwater is mainly for the protection of the railroad embankment."

There is but little doubt that the opening of the river bed would be of great advantage to the shipping frequenting the port, primarily by forming a loop line as it were, and allowing all vessels lying head up stream to reach the lake without the loss of time now consumed in winding round. The sanitary condition of the old river bed would also be improved, and as the city is clearly entitled to demand this opening no further time should be lost. A more liberal system of dredging inside the harbor lines is also in order and where bridges or the approaches thereto can be widened the municipal officers might recommend that steps be taken to have the work done.

The question of dumping the dredging too near the mouth of the harbor, has not been clearly proved as causing the shoal entrance, yet this feature deserves a closer consideration than has been given to it, there ought also be some means devised for keeping dock and wharf property in good order, it is a positive shame to see the dock line under the "great" viaduct in its present state, and it is high time that a more general supervision of the waterway was inaugurated, The municipality as a corporate body have a plain duty to perform in the conservancy of all port rights and improvements, and failing such duty, a body of influential citizens might do much to overcome the apparent inertia noticeable in matters relating to the river and harbor.

A WRECK COURT OF INQUIRY.

Further action is being taken on the important question of determining the causes of marine casualties involving loss of life or the total destruction of valuable floating property. An owner is never repaid for the loss experienced through a casualty occurring to his floating property even if it is a total loss, as this might take place at a time when a lucrative freight was being earned, while the detention necessary for repairs is at all times a heavy call on the wrong side of the ledger.

It is high time that such a court of inquiry as outlined in these columns should be formed so that the marine community may learn something about the causes which lead up to disaster, it is certain that no vessel takes the "bit between her teeth" and either runs ashore or gets into collision, the casualties are not inevitable, neither are they "the act of God," therefore it is in order to learn what other causes contribute to, or are responsible for the accidents.

There is one primary feature which we recognize at this time that should be avoided in the make up of a board of inquiry, and that is ponderosity, and there is rather a tendency to lean toward this failing already.

A Wreck Commissioner appointed by the Bureau of Navigation and directly responsible to the chief of that division is almost the only officer that need to be appointed. In holding an inquiry he would convene his court with the assistance of the U. S. District Attorney and be assisted in his decision by two nautical assessors, who might be local inspectors, two shipmasters, owners, or managing owners of local reputation and technical skill. The only question for such a board to decide would be the cause of disaster and nothing more, this information ought always to be in the possession of the Commissioner of Navigation who by virtue of his office exercises a supervision over the entire mercantile marine.

LAKE FREIGHTS.

The freight situation has not changed, so far as figures go, since the last issue of the RECORD. The ore men have stood together firmly to prevent an advance in the Escanaba rate, and have so far succeeded. The indications are now, however, that the rate will go to 75 cents before the week end, possibly today. Offers of 2¼c. on grain to load the latter part of the month will rise to 2½ c. before much tonnage is obtained, and everything seems possible for an advance in the Escanaba rate. This has been five cents too low, as compared with the Marquette rate, and in consequence the shipments have largely increased, to the disadvantage of Marquette, coal freights are unchanged as to fueling, the entire attention of the vesselmen being devoted to the struggle over down shipments.

THE reproduction of the "whaler" on page 11 on the current issue is from the *Illustrated Buffalo Express* copyrighted 1892 by George E. Matthews and Co., Buffalo, N. Y.

ESTABLISHING HARBOR LINES.

To the Engineer Corps, U. S. A., is left the establishment and conservancy of the navigable portions of the country's waterways within the several districts, and it is of great moment that such lines should be clearly defined, especially is this so in the western country where commercial progress is starting along in leaps and bounds and perhaps liable to be somewhat careless, if not aggressive in the matter of public rights.

In relation to the foregoing it is worthy of note that Capt. Kingman, of the United States Corps of Engineers has made a request that a board of officers be called to establish the harbor lines at Oswego, N. Y., to meet at the United States Engineers' office.

The lines to be established will define the limits of all future construction of wharves, docks, excavations, etc., by either private parties or by the government, and it concerns all who have interests on the water front.

The meeting will be a public one, and any persons who wish to lay before the board anything pertaining in any way to the subject are assured of a welcome.

CONGRATULATORY.

The photo-gravure of the monitor Choctaw sent out as a supplement with *The Marine Record*, last week has been much admired by vessel men.—*The Cleveland Leader.*

Accompanying this week's *Marine Record* is a photo-engraving of the monitor steamship Choctaw. It is the handsomest supplement of the season.—*Milwaukee Wisconsin.*

The Marine Record, of Cleveland, with the number for July 7, has issued a splendid photo-gravure supplement of the new steel monitor steamer Choctaw, recently built at Cleveland. She is a fine vessel, and the picture called forth many exclamations of admiration from local nautical men at this point.—*Toronto Globe.*

A WORTHY ACKNOWLEDGEMENT.

Captain S. H. Fish, late master of the wrecked schoonre Racine desires to tender through the columns of THE MARINE RECORD a grateful acknowledgement for the kind services of the members of the Point aux Barques Life Saving Station on July 3rd.

Captain Fish, arrived at Cleveland last Friday and ascribes the loss of his vessel to the compass being deflected, as he was steering a safe course to avoid all outlying obstacles. The weather was thick on the above date with a north-easterly sea and a good lookout was kept. At 1 a. m., the vessel fetched up on a reef ¾ of a mile from shore and pounded so heavily that it was seen she would soon go to pieces. The Point aux Barques Life Saving crew sighted the vessel and at once proceeded to the rescue. Captain Fish says that too much praise cannot be awarded the life savers for their heroic conduct in the heavy sea in which they worked successfully, and on landing himself and crew they were supplied with dry clothing and warm food.

The bottom pounded out of the vessel and by noon she had broken in two. This was her first trip after a $4,200 rebuild and Captain Fish had only $2,000 insurance on her so that the loss is a great blow to him especially as he is now getting along in years.

A MESSAGE FROM LAKE ERIE.

From the Ashtabula *Beacon* we learn that last Saturday evening W. F. Richards found a bottle on the water's edge. He noticed that it was sealed and contained some paper. Breaking it open he found on one of the slips of paper, in large printed letters, the word "Notice." On the other piece, which was about as large as a piece of note paper, and written on both sides, was the following communication:

"I, Pat McCarty, on this awful night in November, write this letter to inform the one who finds it that the boat I am on is about to founder. Her name is the Finney, and I am going to dave jones locker. Tell my wife that I leave all my possessions to her. She lives in Michigan. The waves are so high now that I can hardly write. The captain was washed overboard just now. Good bye."

The communication was on a piece of wrapping paper, written with a lead pencil and in a legible hand.

The schooner George C. Finney was lost on Lake Erie last fall, and all hands on board were lost. Capt. Dunn, of the steamer Cambria, says that he was acquainted with the captain of the Finney and also with Pat McCarty, the mate who was the writer of the note. The letter was turned over to Postmaster Large of Ashtabula, and at the suggestion of Capt. Dunn, a copy of it will be forwarded to Mrs. Tom Reardon, care of Capt. John McCarty, of the Anchor Line, Buffalo, who he thinks will know the Michigan address of the wife of Mate McCarty. If she can be located the letter found in the bottle will be forwarded to her. So far as known this is the first message that has ever been received from any of the crew of the lost schooner.

(*Continued from page five.*)

White Star line, which leaves for England, July 20th. He hopes to spend a very pleasant two months' vacation visiting places of interest in Europe.

Capt. William H. Johnson, aged 51 years, died suddenly of epilepsey July 9th. He was a tug captain for many years, both in Chicago and Buffalo, and was well known by vessel men. His brother, Capt. Albert Johnson, buried him at Graceland Cemetery, on Monday.

Grain freights on Tuesday ruled at 2 cents on wheat, 1¼ cents on corn. The steamer Niko, which left here Saturday for Buffalo, was chartered by Capt. John Prindiville, at 2 cents. on corn; but 1¾ cents only could be gotten for her consort, the Churchill. A contract was made here June 20th for 200,000 bushels of wheat at 2¼ cents, to load between the 1st and 15th of July. Shipper's option, the grain was shipped last week and this.

Capt. Thomas Wilson, of Cleveland, was in this city last week.

At Miller Brothers' shipyard the tugs Black Ball and M. Shields were in dock for calking; the tugs L. B. Johnson, A, G. Van Schaick, Crowell and Peter Dalton for necessary repairs; the steamer Argonaut for repairs to stern bearing and calking; the steam barge S. K. Martin to have her wheel fastened; the steamer Claribel for some repairs.

I was glad to see old friend James B. Bates, the shipbuilder, around again this week, after five months laying in dock undergoing repairs to his port underpinning.

J. B. Bates & Co., ship-builders, have given the schooner Kanters some new stanchions and stringers forward; new hawse chocks, and calking; the schooner Bertha Barnes, new windlass ends, and a new anchor stock; barge Alleghany, new catheads; steam barge Berrian, considerable repairs; schrs. A. J. Mowry; H. C. Hackley; S. A. Woods and steam barge S. K. Martin and M. C. Neff, some repairs; the schooners Belle Brown and Horace Taber, new bowsprits and jibbooms.

The steamer T. D. Stimson passed up the river Saturday afternoon with her colors at half-mast. Her captain reported that Aubrey Joys, one of her crew, fell overboard Friday night in midlake and was drowned before a boat could reach him. The poor fellow's body was not recovered.

WILLIAMS.

TORONTO, CAN.

Capt. S. Craugle returned last week from the wreck of the steam barge Kincardine, where he had been in the interests of the owner. He states that after going ashore the steamer was burnt to the water's edge, and the natives then stole everything connected with her machinery, leaving only the cylinders and boiler, and they would also have taken them but for lack of appliances to handle them. Capt. Garrett, of the steamer Spartan, has retired from the command of that vessel, and has been succeeded by Capt. Sinclair, late of the Passport, who in the early part of this season has been acting as ship's husband for the steamers of the R. & O. N. Co.

Under the harbor regulations four miles per hour is the limit of speed allowed steamers when running in the harbor, and as several of the excursion steamers have been in the habit of running at full speed, the harbormaster has warned them that if they do not comply with the regulations he will be compelled to have them fined. One of the steamers trading from the port has been reported to the government inspector for carrying more passengers than allowed by her license, so that in all probability the case will come before the police magistrate in a few days.

The new government cruiser Curlew will arrive here in a few days on her route from Owen Sound to the Bay of Fundy. Capt. W. H. Goodfellow adjusted her compasses last week, and was also present on her trial trip, and says that she covered the measured mile easily in the time specified in the contract and everything in her build and equipment proving satisfactory she was formally accepted by the Dominion Government from the builders, The Polson Iron Works Co.

The new steamer Garden City is now running regularly on the Toronto, Pt. Dalhousie and St. Catharines route, and is a handsomely finished steamer, she has very large deck room and is specially adapted for day excursions and will no doubt prove a favorite with the public. She had a large party from St. Catharines on Monday.

Mr. W. A. Geddes left here for Montreal on Sunday on business in connection with the Merchant's Line of steamers. This gentleman has, without doubt one of the most conveniently arranged wharves to be found in Canada, and probably on the whole chain of lakes. Arrangements are such that outgoing and incoming passengers are altogether separate and as fourteen passenger steamers, carrying thousands of people, leave the wharf every day, this is a great desideratum. Large quantities of freight are also handled, and all departments are carried on without a hitch.

SPARTA.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

Captain Campau, of the steamer Wm. Harrison, has been appointed to go in the Corona and Captain McCrea formerly inspector of hulls at this port, has taken command of the Harrison.

Shipping master Rumsey, of the Lake Carriers' Association, was in the city Tuesday.

The little steamer Ismalia, owned by grocer John Reiming was all but demolished in a collision with the ferry steamer Niagara last week.

Mr. Samuel Holmes, of New York, a prominent shipbroker and vessel owner also vice-president of the Saginaw Steel Steamship Co., of San Francisco, was in Buffalo last week. His company own the lake built steamers Keweenaw and Mackinaw, Mr. Holmes praises the vessels without stint. They carry 3,900 tons including fuel on a 23 foot draft. This gentleman is down on the whalebacks as they are at present constructed. While acknowledging the practicability of the whaleback idea, he says no ocean going boats should be so lightly built as the Wetmore.

David Bell hopes to launch the new fire tug this week. Vessels of this class which Mr. Bell builds, have to be moved several hundred feet to the place of launching.

The boiler for Maytham's new tug has finally been fished out of the mud in the bottom of the harbor where it fell when an attempt was made to put it on the vessel, the boiler is now in place on the boat.

Captain Marion Finney, of the steamer F. L. Vance, was taken seriously ill on the trip down to Buffalo, and orders were wired ahead for two physicians to come to the boat on her arrival here. The captain is threatened with paralysis and on the return trip will stop at Detroit for a rest. Captain D. Sullivan formerly of the Veronica, will take the boat up from Detroit.

There have been several more quite serious shortages on grain cargoes from Duluth lately. The America ran behind 800 bushels and the Bartlett 187. Buffalo weighmasters think the trouble is at Duluth.

Coal freights have been more active for the first part of June than was generally expected. Last weeks movement being the heaviest of the season. Rates held steady at former figures. Canal freights have firmed up a little and cargoes are now taken on the basis of 2⅜ cents for wheat to New York.

Captain Thos. Maytham, returned Wednesday morning from a trip to Duluth.

The pleasure steamer Island Belle, which was struck by lightning and burned, has been put in dry dock and will be rebuilt.

ESCANABA, MICH.

Special Correspondence to The Marine Record.

The new steel steamer Cadillac, made her maiden trip last week arriving here Sunday. She loaded 2,100 tons of ore on a draft of fifteen feet two inches and made good time of it. The Cadillac was built by the Chicago Ship Building Co., for the Cleveland Cliffs Iron Co., like her sister ships of the line, she is a neat and splendid craft. Captain Brown is well satisfied with his new command.

The steamer Nellie has discontinued the trips to Chicago, Captain Taylor says it is too long a run for her.

The schooner M. S. Bacon, sprung a leak soon after taking on her load of ore last week and she had to call on the Escanaba Towing & Wrecking Co. for assistance. A steam pump was immediately put aboard of her and she proceeded in tow of the steamer Raleigh to Cleveland.

The steamer White Star, had a little blaze aboard last Sunday but it was promptly taken care of without damage.

Captain Yax says the new boats built at South Chicago for the Minnesota S. S. Co., are going to outcarry his boat but he is meamwhile setting them a good example. Last week he took out from here 3,507 tons of ore (7,855,680 pounds. These Minnesota craft may carry more but they cannot bring it from Lake Superior, they must as the Maryland does, come here for it. The output of ore for last week exceeds 71,000 tons. This exceeds any previous week by 6,000 tons and is greater by one-third than the best weeks work ever done at Ashland.

Shipping master Nesbitt, had a very narrow escape last Sunday while out in a small boat. Prompt assistance was rendered and he was picked up in good health but damp to the chin (Lost a black straw hat No. 9.)

The lightship fitted out by the Burns Transportation Co. for the Eleven foot shoal was placed in position by the wrecker Monarch last week.

ANOTHER CHICAGO BRIDGE DEAL.

Special Correspondence to The Marine Record.

CHICAGO ILLS.--There is a great deal of apprehension in marine circles as to the description of the bridge which the city proposes to construct at Halsted street in place of the one which was wrecked in the recent collision with the steamer Tioga. The aldermen and citizens of the wards interested have been urging the commissoner of public works to give them a large, double roadway, iron bridge like the structures at Rush street, Clark street, etc. Shipping and commercial interests understand that the commissioner has agreed upon one of these large bridges, and they insist that it will obstruce navigation so much at Halsted street that the large steamers and sail vessels cannot get through at all even if a portion of the dock line is cut away. They insist that the city should consult the Secretary of War before determining upon the style of bridge at this point and that the government harbor engineer here should examine into the matter and make his report to the secretary before the work is actually commenced. But some sort of work has already been begun. Pile drivers are at work driving heavy piles and the vessel people say it is evident that the city intends to put up one of those double-roadway bridges in which little attention is given to the needs of navigation. It is likely that a petition will be circulated for signatures in marine and commercial circles citing the threatened danger and forwarded to the Secretary of War. If the consent of the Secretary of War to the construction of the bridge is not obtained by the city, the structure will be liable to condemnation by the War Department after it has been completed, as was the Canal street bridge, and the city officials will then find themselves in a serious dilemma.

DEPARTED UNDER SEALED ORDERS.

Capt. Thomas Collins, the pioneer of St. Lawrence river navigation, passed away at his home in Clayton Thursday afternoon after a brief illness of one week. Capt. Collins was born in Oswego, N. Y., in 1813, and lived in that city until 1852 when he removed to Clayton. In 1829 he sailed the schooner Henry Cleveland into Chicago harbor with the first load of stone for the Chicago pier. In 1843 he sailed a steamer between Coburg and Montreal, which was the first passenger steamer between those ports. In 1845 he sailed the steamer Western between Montreal and Toronto. In 1850 he was master of a steamer running between Garden Island and Montreal. Two years afterward he built the steamer Water Witch, which he ran for seven years between Chicago and Ogdensburg. Commencing in 1858 and continuing for two years he sailed the steamer Northerner between Lewiston and Ogdensburg. This was the first express boat on this route. The first regular passenger boat at the Thousand Islands was the steamer Island Belle and she ran from Cape Vincent to Alexandria Bay. The Belle was built by Capt. Johnson of Clayton and sailed for five years by Capt. Collins. He also built the Atlanta. Capt. Collins was personally known at every port on the great lakes and St. Lawrence river between Montreal and Chicago. He leaves four children, Thomas Collins, jr., of Clayton, William and Simon J. Collins of Cleveland, and Nicholas Collins of Detroit.

LANDING PRIVILEGES FOR PASSENGER STEAMERS.

A conference was held last week in the Mayor's office at Chicago as to the rights of the steamboat owners to land at the foot of Van Buren street and an agreement was come to. The agreement read as follows:

For the purpose of constructing the improvement of the Lake Front by the World's Fair or its employes the owners of the several excursion boats doing business on the Lake Front without waving any of their rights in the premises stipulate that at the request of the chief of construction of the World's Columbian Exposition they shall remove all obstructions on the Lake Front for a distance of 250 feet from the center line of Van Buren street extended, that in any manner interfere with the construction of a pier on the Lake Front within the prescribed limits with the express understanding that all boats permitted to do business on the lake shall do it on like terms so far as the stipulation is concerned as to their boats.

In case the chief of construction of the World's Columbian Exposition shall find it necessary to order any of the boats away from their present moorings, they may have the privilege of mooring at the Lake Front at other places so they do not interfere in any way with the construction of this improvement and nothing herein detained shall be deemed as a waiver by the World's Fair of the right to grant any exclusive privilege for boats to moor at such improvement after the same is constructed, if any such right they have, nor do the parties hereto waive any of their right to dispute such rights, and this agreement shall terminate on the 1st. of October, or as soon thereafter as the World's Columbian Exposition shall have completed the dock at the foot of Van Buren street.

It is also stipulated by the owners of the excursion boats now and heretofore doing business upon the Lake Front at the foot Van Buren street that the bill for injunction filed this day shall be dismissed at complainants' costs and without prejudice.

[Signed] Robert Rae.

Attorney for excursion boats now doing business at the Lake Front, City of Chicago.

W. A. Paulsen.

Representing owners of said boats.

The excursion steamers are running as usual at the Lake Front and doing good business.

TRAFFIC THROUGH THE SAULT CANAL.

The annual report of the Sault canal shows that the water in the lock during the past season averaged lower than ever known before; the number of vessels passing through the canal during the year ending June 30, 1892, was 11,557, an increase of 2,016 above 1891; lockage, 5,615, being 1,001 above 1891; registered tonnage, 9,828,894, an increase of 2,397,451 above 1891; freight tonnage, 10.107,603, an increase of 1,768,622; number of passengers, 25,697, a decrease of 529. The total freight exceeds that of any other fiscal year by 1,768,622 tons The total number of registered steamers passing the canal was 396; sail vessels, 256; total 652. Of these there were 358 American steamers and 38 Canadian; 257 American sails and 19 Canadian. The American steamers carried 13,317 passengers, and the Canadians 12,373. Of unregistered crafts there were 447 passages.

Maritime Law.

District Court, S. D. New York. March 26, 1892.

DAMAGE—INJURY TO VESSEL—DUTY TO PREVENT SUBSEQUENT INCREASE OF DAMAGE.

A canal boat sank at low water at defendants' wharf by their fault, and careened on her side at about 4:45 a. m. The tide began to rise about 6 a. m., and before the cargo was removed some portions of it were damaged. There had been men on the dock before the tide began to rise, but as they demanded double the ordinary stevedores' wages, their services were refused both by the master and the foreman of libelant. Held, that the well settled rule of the obligation of the ship to use all reasonable diligence after an injury to prevent subsequent increase of damages, should have led the master to employ help at once, even at advanced wages; and that the owners of the canal boat could not recover for such damage to the cargo as might have been saved by employing such labor.

THE MANCHESTER SHIP CANAL.

Special Correspondence to The Marine Record.

TORONTO, CAN.—A Canadian journal of importance, while urging the Canadian Government to deepen the Canadian canals to 20 feet, speaks of the "generous aid given by the British parliament" to the Manchester ship canal. In commenting on this the *Globe*, of Toronto, said that it was an unfortunate reference. The ship canal between Manchester and the estuary of the Mersey has not received a penny from the British exchequer. At the outset it was thought that ten million pounds would suffice for the work, and that amount was raised by private subscription in Manchester and other towns engaged in the cotton trade. By means of the canal, ocean-going vessels will go from New Orleans or Galveston with cotton cargoes direct to Manchester without breaking bulk at Liverpool. Committes were formed to collect subscriptions for canal shares. Mill owners, mill operatives and everybody else interested in the trade put up their money freely, and the same mentioned was got without difficulty. To encourage small investors, Parliament authorized the company to pay interest out of capital while the work of construction was in progress, just as our Parliament did in the case of the Canadian Pacific. At a later period, owing to the death of the contractor, to mismanagement and to flood and accidents, the company became embarassed and more money had to be obtained in order that the work might be completed. Besides digging a canal 35 miles long with five flights of locks, and building spacious docks at Manchester the company had agreeed to take over two old canals and to settle matters with the railroad companies—a costly proceeding. For a time it looked as if the enterprise was doomed to fail, for no more money could be procured by the sale of shares. At length the Corporotion of Manchester went to the rescue and pledged the city taxes for three millions, sterling, which will be sufficient, it is said, to finish the job. Parliament did not contribute a copper, all it did was to pass the necessary legislation. Nowadays in England such ventures are left wholly to private enterprise. Parliament takes the ground that if they are required in the interest of commerce, commerce will soon find ways and means of carrying them through."

THE NEWPORT NEWS SHIP-YARD.

The following are some of the principal dimensions of the plant of the Newport News Shipbuilding and Dry Dock Co., at Newport News, Va.:

The ship yard contains 75 acres of land, with frontage on the water of 2,600 feet, the buildings cover 7 acres.

Dimensions of the dry dock are length on top, 600 feet; width on top, 130 feet; width on bottom, 50 feet; width at entrance, 93 feet; draught of water over sill, 25 feet; time required for pumping water out of dock 1 hour, 30 minutes.

There are four piers of the following dimensions: No. 1, 60x900 feet; No. 2, 60x350 feet; No. 3, 80x350; No. 4, 60x550; Outfitting basin, 900x500.

The ways No. 1 and 2, are 400 feet in length; No. 3 and 4, 450 feet in length; No. 5, 6, 7, and 8, each, 500 in length.

The various shops are fitted with machinery of the latest pattern, and are capable of handling the largest work known in shipbuilding.

The machine and boiler shops are supplied with power-traveling cranes of 40 tons capacity, and the appliances throughout the yard for handling material are of novel design, enabling work to be done with dispatch and in an economical manner.

A WEST POINT STORY.

Two plain ordinary citizens visited West Point for the first time, and were deeply interested in the blithesome cadet. With the assurance that they were on government ground, and that they were finite parts of the same government they went where they pleased, and werenot interrupted. As the day waned, however, they drew nigh forbidden ground—a plot sacred to the embryo generals. As they stepped across a line, ignorant of the awful trespass, a mild youth with spotless uniform and heavy musket ran up.

"No citizens allowed here," said the sentry.

The citizens turned sadly away.

"I feel like the sunset gun," remarked one.

The sentry stopped to listen.

"Why?" inquired the other citizen.

"Because I've just been fired off," was the answer; and to the citizens' delight, the sentry smiled.—*Harpers Young People.*

RIVER AND HARBOR BILL.

The River and Harbor Appropriation Bill as finally perfected by the conferrees of the House and Senate contains the following lake items: The bill has now passed both Houses and only awaits the President's approval to become a law. Ashtabula, $70,000; Black River, $20,000; Buffalo, $300,000; Charlotte, $25,000; Cleveland, $100,000; Conneaut, $40,000; Dunkirk, $20,000; Erie, $40,000; Fairport, $20,000; Huron, $15,000; Niagara River, $95,000; Oswego, $40,000; Port Clinton, $10,000; Sandusky, $41,712; Toledo, $200,000; Vermillion, $2,000. Surveys are ordered for the Allegheny River between Olean and Warren and of Dunkirk harbor with a view to securing 16 feet of water.

The Sundry Civil Appropriation Bill, contains the following new items added by that committee, which will be of interest to the lakes: Buffalo breakwater, fog signal, $4,300; St. Mary' River, range lights, $5,000; Frankfort pierhead, fog bell, $1,000; Lime-kiln Crossing, light ships, $1,000; range lights above Grassy Island, Detroit, $1,500; Detroit River, light vessels, $8,600; range light on Mamajuda Island, $1,500; range lights on Grosse Isle, Detroit, $2,500; light ship at Bar Point. Lake Erie, $25,000; Superior Bay lights, Wisconsin, $1,200; tender for 9th Lighthouse District, $95,000; elevator for the new custom house at Erie, $6,000.

CAREFULLY ADMINISTERED.

From the twenty-fourth annual report of the Dominion Department of Marine, by Minister of Marine, Charles H. Tupper, it is learned that the total number of lighthouses, fog whistles and fog horns now supported by the Dominion is 764, respectively as follows:—710, 23 and 31, no less than 134 additions have been made to these absolute aids to navigation since 1884 and yet the cost of maintenance has by careful administration been decreased.

In 1884 the keep up of 134 fewer aids was $456,868.38 while in 1891 the cost was $455,254.42 showing a saving of upwards of $1,600 with an increase of 113 new lighthouses and 21 new fog horns.

How much of this saving with increased service is due to the system of having the affairs of the Dominion Merchant Marine placed under one bureau we are not in a position to state, but, the argument presented by the foregoing figures is incontrovertible and may easily point a moral to the different bureaus of the United States.

STATEMENT OF TRAFFIC THROUGH ST. MARY'S FALLS CANAL.

The following is an official statement of the traffic through the St. Mary's Fall's Canal for the month ending June 30, 1892:

EAST BOUND.		WEST BOUND.	
Flour	746,336 brls.	Coal	462,564 tons.
Corn	191,040 bush.	Flour	200 brls.
Wheat	3,356,927 "	Grain	5,750 bush.
Building Stone	7,153 tons.	Man'f't'r'd Iron	7,040 tons.
Copper	9,438 "	Salt	25,813 brls.
Iron Ore	800,965 "	Lumber	75,738 M ft;
Pig Iron	1,624 "	Unclas'd freight	46,079 tons.
Lumber	75,738 M ft.	Passengers	2,098
Silver Ore	40 tons.		
Unclassified	22,238 "		
Passengers	1,846		

The total east bound freight in net tons was 1,152,249; west bound, 519,630 tons: total amount of freight, 1,671,879 tons, and 3,944 passengers.

RAISING THE FOG.

ACCORDING to the *Age of Steel* recent experiments in Boston Harbor, relative to clearing fogs by means of electric discharges, have resulted in the absolute annihilation of dense fog over an area of two acres. But the longest time that the atmosphere has remained free from fog after each discharge has been seven minutes, the aqueous vapor pouring in again from all sides to refill the freed space. The experiments were conducted from the deck of a steamer, and it was found that by delivering a succession of discharges at intervals of two minutes the above mentioned area around the vessel was kept practically clear of fog.

TO MANN THE NEW NAVY.

The legislation for increasing the number of enlisted men so that the new vessels soon to be placed in commission may be properly manned is not likely to pass during this Congress. A makeshift in the form of an amendent authorizes the enlistment temporarily of a number of additional men for service in the anual review, but as their services must be paid for out of the small sum of $50,000 appropriated toward the expenses of the review, the Naval authorities are at a loss to know how they will be able to get enough men properly to man vessels.

MORE LIGHTKEEPERS APPOINTED.

The Lighthouse Board have made the following lake appointments in addition to the list recently published in the RECORD: Lightkeepers Thomas R. Ketchum, South Manitou; Charles Marshall, St. Helena; John Herman, Waugoschance; George Larson, Waukegan; assistant keepers—Joseph A. Martin, Skilligallee; Benjamin E. Arnold, South Manitou; James Wacter, South Fox Island; Hamilton Martin, Wind-Mill Point; Henry Spurbeck, Two Harbors.

DARING AND RECKLESS NAVIGATION.

SAULT STE MARIE, July 8, 1892.

To The Marine Record.

On the morning of July 5th last, while the Lasalle and other steamers with consorts were coming down the "Soo" River and nearing the turning buoy off Garden River Village, the steamer Peerless was met bound up. Her master sounded one blast of the whistle asking for the starboard side which the captain of the down bound steamer promptly answered and such signals were so understood that each would pass to starboard, however, when the Peerless had approached within five lengths of the down coming steamer her captain sounded two blasts of the whistle and was sheering to port. The captain of the approaching steamer did not reply and rightly too, as there was no time for such daring work and his heavy laden steamer already slowing in response to the first signals in that dangerous bend of the river. The master of the Peerless in time discovered his mistake in cross signalling and again gave the Peerless a port helm and luckily, aye, fortunately she responded to the changed helm, averting a disaster which would have resulted in the probable sinking of both steamers and no doubt causing loss of life as the bows of the Peerless had many lady passengers no doubt enjoying the refreshing morning air of the Northern River and viewing the romantic scenery of the "Soo". They little knew of the danger and the miraculous escape of a disastrous collision by an arms length almost as the Peerless engine was working strong. The moment was exciting to those who realized the dangerous position of the approaching steamers. The passengers were perhaps ignorant of the situation and did not seem to reflect on the wrong act of her master with his cross signaling. Had the steamers met it no dobut would have been the most serious calamity on the "Soo River" nevertheless it was a providential escape of such.

Another steamer of the same line as the Peerless is blamed for the cause of a collision and sinking near the Black Hole last year. In conclusion I wish to draw your attention also the owners and masters of passenger steamers to the speed they maintain in narrow and dangerous channels. The passenger steamers are at all times hurrying along to if possible gain a lockage at the canal before rival steamers. The master of the Peerless should be censured for his unseamanlike act.

GEORGE WILSON, 1843 Michigan avenue, Chicago, Ill.

A SCHOOL SHIP FOR THE LAKES.

BUREAU OF NAVIGATION,
WASHINGTON, D. C.

To The Marine Record, Cleveland, O.:

I would like your views as to the practicability of the establishment of a nautical school on the Great Lakes, for the education and training of American boys for a sea-faring life, and more particularly as regards a continuance of an adequate supply of efficient officers and seamen for the already and rapidly increasing merchant vessels on these mid-continent seas.

It is suggested that the Government should asstst in the matter, by placing a school-ship at some proper point, and detailing competent instructors from the different services of the United States. American boys could then be given a special training to meet the peculiar conditions of navigation on the lakes that it would be difficult to secure by any other means; and the country would have in a short time "a self-supporting militia of seamen or naval reserve for the Great Lakes, a force of inestimable value to any nation that aspires to naval or commercial greatness."

If the project is favorably considered some legislation would be required by Congress to accomplish the desired object.

I will thank you to give the matter an early consideration.

Respectfully yours,

E. C. O'BRIEN,
Commissioner.

SHIPBUILDING ON THE PACIFIC COAST.

The launch of a large ocean steamer at midnight, says Industry, is a singular event. The glare of torches, and the noise of "wedging up," with the attendant confusion, spectators mixed and wandering in crowds about the vessel and yard, make up a memorable occasion. These were the circumstances at the launching of the Pacific Mail steamship Peru on the 11th ultimo, at the Union Iron Works in San Francisco. This vessel has been constructed in a remarkably short time, and as the Government work on the cruiser Oregon and coast defense vessel Monterey, and other Government work, besides the dock and repair work, was carried on at the same time, with a force of 600 men on the Peru, it indicates something of the ship-building facilities at the Union Iron Works. The Peru is 345 ft. long, 45 ft. beam, 29 ft. deep, and will have a gross tonnage of 8,800. The engines are triple expansion, with cylinders 28, 41 and 70 in. diameter, with stroke 4 ft., capable of developing 2,800 horse power. This is the largest steamer that has been constructed on the coast, and has presented no difficulties whatever, except that the ship filled the building shed to within 6 in. of its sides. The Union Iron Works will have to extend their ship-building room, or sheds for construction. The other departments are crowded also, but these can be "doubled up" with less trouble than sheds and slips can be provided.

A WHALER ON THE LAKES.

The whaler Progress, an old celebrated New Bedford "wind jammer," has fetched up on the lakes after a career of nearly half a century on the "briny."

Perhaps there are a few lake men who may feel interested in viewing our illustration of the whaler given on this page yet the lake marine has passed from sail to steam in so short a period that perhaps our expert steamboat-men may take exceptions to the ancient picture which we now represent as being the first arrival on the Great Lakes of the almost-forgotten whalers.

We have heretofore given what we consider a complete description of the old whaler, yet by exclusive permission of the "Illustrated Buffalo Express" we reproduce in this connection a veritable salt water "tub" as opposed to an "iron tank" such as our readers are nearly surfeited with viewing.

The Progress has laid for the past 20 years or so at a deserted pier in New Bedford harbor, and is only now resuscitated, as it were to show the un-technical natures of the "far west" what the apendages for commercial whaling were a half century ago.

The Progress had a hard time in getting through the St. Lawrence and Welland canals. She was stripped of everything that would lighten her, even her spars and some 12 inches of her keel being taken off to give her less draught. Her ballast was shipped up by rail. As built, she is of 340 net tons measurement, 107 feet long 27 feet beam and 19 feet keel. Like many craft of her calling, she is a decided back number and has done nothing for the past 20 years. Even in the time of the War the whalers were being relegated to the shade by kerosene oil, and the Progress was then bought by the Government and made part of the famous stone fleet that was sent to Charleston Harbor to be sunk so as to close it to the foreign trade. She was not sunk at that time, however, and after the war the government sold her again. A syndicate now control her to exhibit at the World's Fair.

Owing to the condition of her sails and the probable head winds Capt. Gifford had the Progress towed as far as Detroit, where she will be fitted out for the Fair. She will be arranged so as to accommodate the greatest number of visitors, and an admission fee is expected to pay all the expense of the trip and exhibition. The Progress is a curiosity, and is said to be "the only one that's left of all the family" of barque rigged whalers that sailed out of New England ports 50 years ago, unless there are a few still in existence on the Pacific slope, and we know that a number still remain there.

A FRESH WATER WONDER.

THE WHALING BARQUE PROGRESS.

NOTICE TO MARINERS.

The Outer Island fog signal is disabled and will not be in operation until repaired, which will be done as soon as possible. By order of the Light House Board, E. T. Woodward, commander U. S. N., inspector 11th district.

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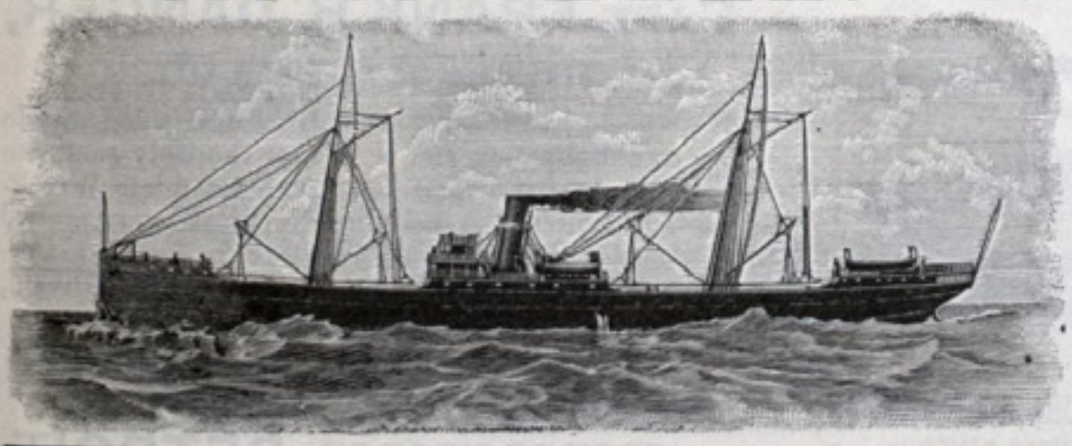

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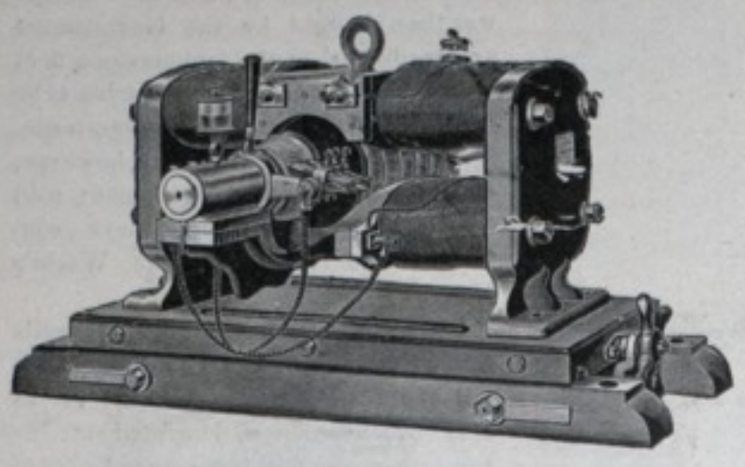

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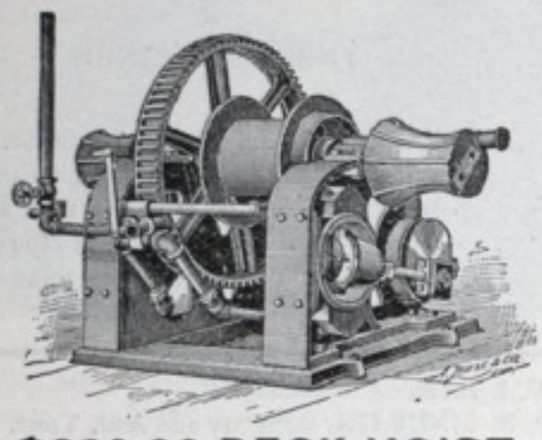

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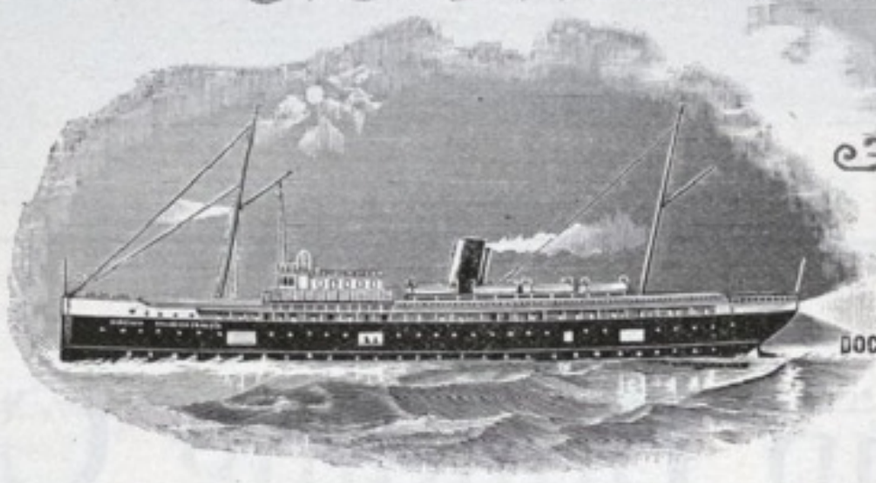

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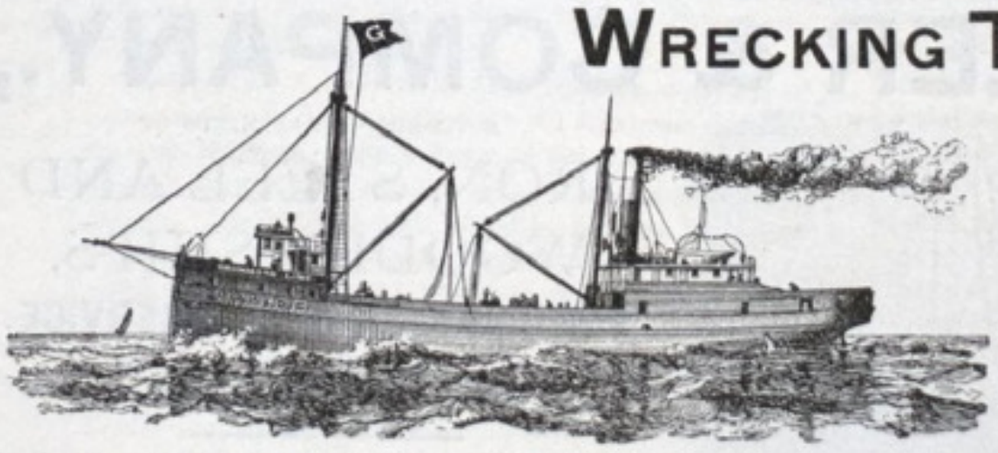

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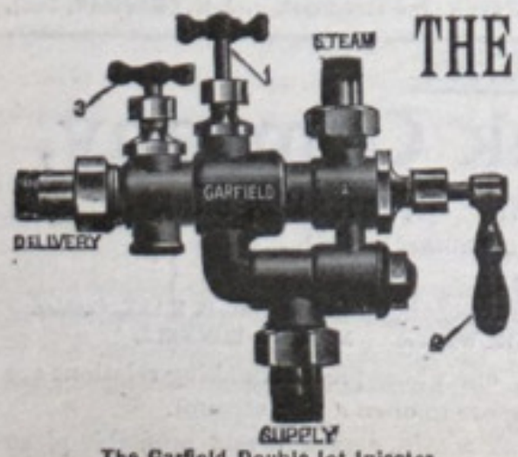

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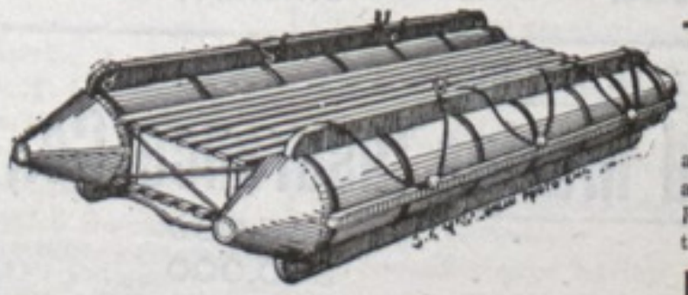

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